Minutes of the 40th SiD optimization meeting

17-Jul-2015

Present:

Tim Barklow (TB)
Jim Brau (JB)
Joel Goldstein (JG)
Norman Graf (NG)
Richard Kriske (RK)
Takashi Maruyama (TM)
Christopher Milke (CM)
Bruce Schumm (BS)
Jan Strube (JS)
Fergus Wilson (FW)

Last week's Work Items:

- Create script that combines the three different steps for converting from ASCII to hepevt, from hepevt to stdhep, and merging a number of particles into the same event for easier processing into one script to convert from ASCII to LCIO. (AS) ← DONE
- Provide starting point in GeomConverter for implementing a cylinder rotated around the IP by the crossing angle. (JS) ← DONE
- Re-make the MIP response plots in units of MIPs to compare with DESY plots. Poisson statistics of how many SiPM pixels fire might still have to be implemented. (JS)

Agenda and points of discussion:

1. Generation of SUSY files
   a. SLHA files contain strange decays, seemingly stau decaying to electron + neutralino. TB chased this down to a change of convention: The SUSY partners of leptons used to be denoted as 10000XX, where XX is the PDG id of the lepton. The new convention sees them ordered by mass.
   b. Generation of the events is pending.
2. Changes to the Forward Region
   a. Beam cal is larger in R and moved out in z. Reason for this change?
   b. The outer radius of the Forward Mask is undefined.
   c. The LumiCal should be centered on the extraction line

      d.   The support tube is centered on z. This collides with the new dimension and orientation of the beamcal. How much freedom is there in changing the dimensions and position of the beam cal?

      e.   The support tube is much longer now. Reasons for this change?

      f.   Mask M1 seems to be gone from the Excel spreadsheet

      g.   How much space is needed for the Beamcal readout and services?

      h.   Beam Cal coverage should be around 40 mrad. It is currently ~60 mrad

      i.   Gap between ECAL end cap and barrel? How much space is needed for services? Where should this space be?

New Work Items:

- Re-make the MIP response plots in units of MIPs to compare with DESY plots. Poisson statistics of how many SiPM pixels fire might still have to be implemented. (JS)
- Contact Tom and Marco regarding the open questions about the engineering design (CM)
- Contact DESY regarding new guineapig files (BS)
- Generate SUSY files according to SLHA records (TB)